

Appl. No. 10/709,278
Amdt. dated May 12, 2006
Reply to Office action of February 21, 2006

REMARKS/ARGUMENTS

1. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

- 5 Applicant has not provided any material choice that would prevent unpolymerized precursors diffusing out from the low-k dielectric layer from contacting an overlying resist and because applicant did not provide any material choice, there is no evidence that the blocking layer would prevent unpolymerized precursors diffusing out from the low-k dielectric
10 layer from contacting an overlying resist.

Response:

- The applicant would like to point out that the blocking layer recited in claim 1 and the amended claim 8 in fact comprises the same material with
15 the SiC layer, and the difference between the blocking layer and the SiC layer is their surface property. In other words, the "blocking layer" is used to define the surface of the SiC layer having modified property. Therefore no material choice needs to be provided.

- 20 Furthermore, please note that the blocking layer is formed by hitting the SiC layer with Ar plasma. It is well known that the Ar plasma does not react with SiC, but modifies the contact surface only. Those skilled in the art will easily realize that the hitting of the Ar plasma distorts the lattice of the contacted surface of the SiC layer and makes it rough. *It is an accepted*
25 *scientific concept that the unpolymerized precursors diffuse out through channels in the lattice of the SiC layer, and therefore distortion of the channels effectively obstructs the diffusion.* Based on this concept, the modified surface of the SiC layer, namely the blocking layer, effectively

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prevents the unpolymerized precursors out of the low-k dielectric layer from contacting an overlying resist. The concept is well known to those of ordinary skill in the art such that design constraints laid out in the claims and specification are sufficient for one to make and use the invention.

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Therefore the applicant asserts that the blocking layer is used to limit the modified surface property of the SiC layer and no material choice is needed to provide. Reconsideration of claims 1-13 is respectfully requested.

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2. Claims 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Chung-Shi Liu (U.S. Patent No. 6,295, 457).

Response:

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Claim 8 has been amended to overcome this rejection. Specifically, the limitation of "the blocking layer is formed by Ar plasma hitting the SiC layer" and "The Ar plasma comprising fluorine substance" respectively recited in original claims 9 and 10 have been added to claim 8. No new matter is entered.

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The Examiner has acknowledged that the limitations recited in claim 10 would be allowed if rewritten in independent form in the Office action. Thus, the amended claim 8 should be allowed. Reconsideration of claim 8 is therefore respectfully requested.

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Claim 9 is cancelled and is no longer in need of consideration.

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over

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Chung-Shi (U.S. Patent No. 6,294,457) in view of Chang et al (U.S. Patent No. 6,642,153).

Response:

- 5 Claim 12 is dependent on the amended claim 8 and should be allowed if the amended claim 8 is allowed. Reconsideration of claim 12 is therefore politely requested.

4. Allowable Subject Matter

- 10 Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, first paragraph, set forth in the Office action.

- Claims 2-7, and 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first paragraph, set forth in the Office
15 action and to include all of the limitations of the base claim and any intervening claims.

- Claims 10-11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in the Office action and to include all of the limitations of the base claim and any intervening claims.

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Response:

 As mentioned above, the applicant believes that claims 1-7 and 13 have overcome the rejection under 35 U.S.C. 112, first paragraph, hence the applicant respectfully requests that claims 1-7 and 13 to be allowed.

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 Because claim 10 is indicated by the examiner as being allowable if rewritten to include all of limitations of the base claim, all limitations of claim 10 have been added to currently amended claim 8. Claim 11 is

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dependent on the amended claim 8 and should be allowed if the amended claim 8 is allowed.

5. Objection of claim 13:

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Response:

Claim 13 is currently amended to overcome this objection, and no new matter is introduced.

10 Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Sincerely yours,

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Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)

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